



Service Information Bulletins

**Spare Parts Stores
and
Repair Shops**



No. 1

Aufpressen des Antriebsritzels auf den Kurbeltrieb

Zum Aufpressen des Antriebsritzels auf den Kurbeltrieb empfiehlt es sich, eine Aufpreßhülse mit 18 mm Innendurchmesser, 24 mm Außendurchmesser und 15 mm Höhe zu verwenden, die von uns unter Teil-Nr. 088 891 921 bezogen werden kann.

Pressing the driving sprocket onto the crankshaft

It is advisable to use a sleeve for pressing the driving sprocket onto the crankshaft. The dimensions of this sleeve are: internal diameter 18 mm (0.71 in), external diameter 24 mm (0.95 in), and length 15 mm (0.59 in). It can be obtained from us as Part No. 088 891 921.

Emmanchement à pression du pignon d'attaque sur le vilebrequin

Pour emmancher le pignon d'attaque sur le vilebrequin il est recommandé de se servir d'une bague aux dimensions suivantes: alésage 18 mm, diamètre extérieur 24 mm et hauteur 15 mm. Elle peut être fournie par nous en demandant le No. de pièce 088 891 921.

Calado a presión del piñón de accionamiento sobre el cigüeñal

Para calar el piñón de accionamiento sobre el cigüeñal, se recomienda utilizar un buje de calado a presión de un diámetro interior de 18 mm, diámetro exterior de 24 mm y una altura de 15 mm; dicha pieza puede ser entregada por nosotros bajo el número de pieza 088 891 921.

Fixação sob pressão do pinhão de ataque na cambota

Para fixar sob pressão o pinhão de ataque na cambota é aconselhável a utilização de um casquilho apropriado com as seguintes dimensões: diâmetro interior 18 mm, diâmetro exterior 24 mm e altura 15 mm. Pode ser obtido encomendando-nos o No. de Peça 088 891 921.

Montaggio alla pressa del pignone di comando sull'albero a gomito

Per eseguire il montaggio alla pressa del pignone di comando sull'albero a gomito, si raccomanda di impiegare una bussola di pressatura di diametro interno 18 mm, diametro esterno 24 mm e altezza 15 mm; tale bussola può essere acquistata presso di noi quale particolare No. 088 891 921

Oppersen van het aandrijvings-tandwiel op het krukasdrijfwerk

Het verdient aanbeveling, voor het oppersen van het aandrijvings-tandwiel (rondsel) op het krukasdrijfwerk een oppers-huls van 18 mm binnen-diameter, 24 mm buiten-diameter en 15 mm hoogte te bezigen; deze huls kan door ons onder onderdeel-nummer 088 891 921 worden geleverd.



Hinterrad-Teleskopstoßdämpfer

Die Teleskopstoßdämpfer werden neuerdings mit einer Sicherungsscheibe 8 DIN 6799 (seither Seegerring) geliefert. Beim Einbau ist darauf zu achten, daß zusätzlich eine Scheibe 083 832 037 eingebaut wird.

Telescopic shock absorber for rear wheel

The telescopic shock absorbers are now fitted with an 8-mm lock washer to specification DIN 6799 (a circlip was fitted in the past). When fitting, make certain that a washer 083 832 037 is also used.

Amortisseur télescopique arrière

Les amortisseurs télescopiques sont livrés depuis quelque temps avec une rondelle de sûreté 8 DIN 6799 (auparavant circlip). Ajoutez au montage une rondelle 083 832 037.

Amortiguador telescópico de rueda trasera

Los amortiguadores telescópicos se entregan últimamente con una arandela de seguridad 8 DIN 6799 (hasta ahora circlip). En el montaje hay que poner especial cuidado que se monte adicionalmente una arandela 083 832 037.

Amortecedor telescópico para a roda trazeira

Os amortecedores telescópicos são fornecidos actualmente com uma arruela de segurança 8 DIN 6799 (antes usava-se um clip retentor "Seeger"). Ao proceder à montagem é necessário ter presente que se deve montar igualmente uma arruela 083 832 037.

Ammortizzatore a cannocchiale per sospensione posteriore

Gli ammortizzatori a cannocchiale vengono forniti attualmente provvisti di una rondella di sicurezza 8 DIN 6799 (che sostituisce l'anello Seeger di sicurezza assiale di cui erano finora provvisti). All'atto del montaggio di tale rondella di sicurezza bisogna avere l'avvertenza di montare una rondella aggiuntiva 083 832 037.

Achterwiel-telescoop-schokbrekers

De telescoop-schokbrekers worden in de laatste tijd met een zekeringsschijf 8 DIN 6799 (vroeger met veiligheidsring) geleverd. Bij het monteren is er op te letten, dat een extra schijf 083 832 037 wordt ingebouwd.



No. 3

Schutzschutz an der Vorderradbremse

Um das Eindringen von Schmutz in die Vorderradbremse zu verhindern, wird ab Fahrzeug Nr. 1 291 106 / 790 775 eine Abdeckkappe (085 851 051) eingebaut. Es empfiehlt sich, solche Abdeckkappen im Reparaturweg, je nach den Betriebsverhältnissen, auch in früher gelieferte Fahrzeuge einzubauen.

Protection of front brake against dirt

To prevent dirt penetrating into the front brake, a protective cap (085 851 051) is being fitted from machine No. 1 291 106 / 790 775. If conditions warrant it, it is advisable to fit these caps to earlier machines when they are brought in for repair.

Cache-poussière du frein avant

Pour éviter la pénétration de la saleté dans le frein avant, une cuvette de protection (085 851 051) est montée sur les véhicules à partir du No. 1 291 106 / 790 775. Il est recommandé de monter aussi ces cuvettes, le cas échéant, sur les véhicules plus anciens à l'occasion de réparations.

Dispositivo guardabarro en el freno de la rueda delantera

Para evitar la entrada de suciedad en el freno de la rueda delantera se monta a partir del vehículo No. 1 291 106 / 790 775 una tapa de cubierta (085 851 051). Se recomienda montar dichas tapas de cubierta también en vehículos entregados anteriormente, en el transcurso de alguna reparación según las condiciones de uso.

Protecção do travão dianteiro contra sujidades

Para evitar a penetração de sujidade no travão dianteiro, monta-se uma capa de protecção (085 851 051) a partir do veículo No. 1 291 106 / 790 775. Recomendamos que, se as circunstâncias o pedirem, que tais capas de protecção sejam igualmente adaptadas a veículos mais antigos quando de trabalhos de reparação.

Cuffia di protezione contro l'ingresso di corpi estranei, sporcizia e simili nel freno della ruota anteriore

Per evitare l'ingresso di corpi estranei, sporcizia e simili nel freno della ruota anteriore, a partire dalla macchina matr. 1 291 106 / 790 775 è stata montata una cuffia di copertura (085 851 051). Si raccomanda di montare tali cuffie di protezione anche sulle macchine di fornitura precedente alla modifica, in occasione dell'esecuzione sulle stesse di lavori di riparazione di guasti, di revisione ecc., giudicando se sia il caso in base alle condizioni di esercizio di ciascuna macchina.

Bescherming tegen vuil aan de voorwielrem

Om het binnenraken van vuil in de voorwielrem te voorkomen, wordt vanaf voertuig No. 1 291 106 / 790 775 een schermkap (085 851 051) gemonteerd. Het verdient aanbeveling, deze schermkappen bij wijze van reparatie, al naar gelang van de omstandigheden ook op vroeger geleverde voertuigen te doen monteren.



Motorleistung und Sitzbank

No. 4

Wenn anstelle des Fahrersattels eine Sitzbank angebracht wird, ist darauf zu achten, daß die Öffnung oben im Rahmen nicht vollkommen abgedeckt wird. Gegebenenfalls muß die Befestigungsplatte der Sitzbank mit mehreren Bohrungen für ausreichenden Luftdurchgang zum Vergaser versehen werden, da sonst infolge Luftmangel eine **Leistungsverminderung** und eine **Kraftstoffverbrauchserhöhung** eintreten wird.

Engine output and dual seat

If the saddle is replaced by a dual seat, care must be taken to ensure that the opening at the top of the frame is not completely closed. If necessary a number of holes should be drilled in the base of the dual seat in order to permit sufficient air to flow to the carburettor, since otherwise the restriction in the air supply will lead to a **reduction in engine output** and an **increase in fuel consumption**.

Rendement du moteur et selle tandem

En remplaçant la selle normale par une selle biplace, il faut veiller à ce que l'ouverture dans le haut du cadre ne soit pas complètement bouchée. Le cas échéant il faut percer dans la plaque de fixation de la selle plusieurs trous pour laisser un passage suffisant à l'air vers le carburateur, faute de quoi il en résulterait une **diminution de rendement** et une **augmentation de la consommation** par suite du manque d'air.

Potencia del motor y asiento biplaza

Cuando en vez de un sillín común de motocicleta se monta un asiento biplaza, hay que poner especial atención que no se tape por completo la apertura de la parte superior del cuadro. Según el caso dado habrá que agujerear varias veces la placa de fijación del asiento biplaza para que haya un pase de aire suficiente hacia el carburador, caso contrario habrá una **perdida de potencia y aumento del gasto de carburante** por la falta de aire.

Rendimento do motor e selim duplo (assento corrido)

Se o selim for substituído por um assento corrido tem que se ter presente o facto de que a abertura na parte superior do quadro não seja completamente fechada. Em caso de necessidade podem-se abrir alguns orifícios na placa de fixação do assento duplo para que o ar possa passar em quantidade suficiente para o carburador, falta que não se observando levaria a uma **diminuição da potência e a um consequente aumento do consumo**, em virtude da falta de ar suficiente.

Potenza del motore e sedile

Quando al posto del sellino per il guidatore viene applicato sulla macchina un sedile, si dovrà curare che l'apertura esistente nella parte superiore del telaio non venga, da tale sedile, completamente coperta ed ostruita. Se sarà il caso si dovrà provvedere la piastra di fissaggio del sedile di un certo numero di buchi onde creare una luce di passaggio dell'aria al carburatore sufficientemente grande, poichè altrimenti, in conseguenza alla carenza di aria, si verrebbe ad avere un **calo di potenza del motore ed un aumento del suo consumo di carburante**.

Motor-prestatie en zitbank

Indien inplaats van het berijders-zadel een zitbank wordt aangebracht, is er op te letten, dat de opening boven in het frame niet volledig bedekt wordt. Desnoods moet de verstevigingsplaat van de zitbank van meerdere boorgaten worden voorzien, om voldoende luchttoevoer naar de carburateur te waarborgen. Mocht dit niet geschieden, zal ten gevolge van een tekort aan luchttoevoer een prestatie-mindering alsmede een verhoogd brandstofverbruik het gevolg zijn.



No. 5

Stoppmutter für vorgespannte Vorderfeder

Im Anschluß an KDM Folge 29, Max Nr. 17, weisen wir darauf hin, daß **beim Zusammenbau der vorgespannten Vorderfeder die beiden Muttern auf der Zugstange sehr stramm angezogen sein müssen.** Ist dies nicht der Fall, so besteht die Möglichkeit, daß sich diese Muttern lösen und die Federn an ihrem oberen Ende frei werden, was zu unangenehmen Folgen führen kann. Neuerdings verwenden wir als zusätzliche Sicherung anstelle der normalen Sechskantmutter zum **Kontern eine Stoppmutter** (084 841 037).

Anlässlich der Durchführung von Kundendienstarbeiten sind bei allen Fahrzeugen von Nr. 1 288 521 / 788 809 bis Nr. 1 297 000 / 796 790 Sechskantmutter durch Stoppmutter zu ersetzen.

Zum festen Anziehen und zum Festhalten der unteren Mutter beim Festziehen der Konter-Stoppmutter ist es zweckmäßig, einen Spezialschlüssel zu verwenden. Dieser kann in jeder Werkstatt aus einem handelsüblichen Zwölfkant-Ringschlüssel SW 14 ohne weiteres hergestellt werden, indem die Schlüsselhöhe auf 4 mm ermäßigt und gegebenenfalls die Außenseite der Ringpartie so nachgearbeitet wird, daß der Schlüssel nicht über die Höhe der angezogenen Mutter herausragt und nicht an der Kante der Einrollmutter ansteht.

Self-locking nut for pre-stressed front springs

With reference to Service Circular Series 29, Max No. 17, your attention is drawn to the fact that **when assembling the pre-stressed front springs, the two nuts on the tie rod must be very firmly tightened up.** If this is not done, it is possible for the nuts to become loose, and for the upper ends of the springs to be freed, which can have very unpleasant results. We have recently introduced a **self-locking nut** (084 841 037) in place of the normal hexagonal lock nut as an additional safety measure. The original hexagonal nuts should be replaced by self-locking nuts on all machines from No. 1 288 521 / 788 809 to No. 1 297 000 / 796 790 when carrying out normal servicing.

To tighten up the lower nut and to hold it while the lock nut is being tightened up it is advisable to use a special spanner. This can be made up without difficulty in any workshop by modifying a normal twelve-sided ring spanner with a width across the flats of 14 mm (0.55 in). The thickness of the spanner should be reduced to 4 mm (0.16 in), and the outside of the ring reduced as necessary to ensure that the spanner does not project above the lower nut when it is tightened up, and does not foul the self-locking nut.

Ecrou de sécurité pour ressort précomprimé

Complétant la circulaire de Service après-vente, suite 29, Max No. 17, nous vous signalons, qu'en **montant le ressort précomprimé avant, il importe de bloquer convenablement les deux écrous de la tringle.** En omettant cette précaution, les écrous pourraient se dévisser et libérer l'extrémité supérieure des ressorts ce qui causeraient de sérieux ennuis. Nouvellement nous utilisons pour le blocage supplémentaire au lieu de l'écrou normal à 6 pans, un **écrou de sécurité (084 841 037) comme contre-écrou.** Sur tous les véhicules à partir du No. 1 288 521 / 788 809 jusqu'au No. 1 297 000 / 796 790 il y a lieu de remplacer, au cours de réparations par une station-service, tous les écrous 6 pans par des écrous de sécurité.

Pour le blocage et le maintien du premier écrou, lors du blocage du contre-écrou de sécurité, il est recommandé de faire usage d'une clé spéciale. Elle peut être confectionnée dans n'importe quel atelier en partant d'une clé de 14 à 12 pans fermée qui sera ramenée à une épaisseur de 4 mm de sorte qu'elle ne dépasse pas la hauteur du premier écrou et ne touche pas l'écrou de sécurité.

Tuerca autoretentora para nuelle delantero con tensión previa

Continuando con las comunicaciones de Servicio al cliente No. 29, Max, No. 17, advertimos especialmente que **al montar los muelles delanteros pretendidos, tienen que estar bien apretadas las 2 tuercas en la varilla de tensión.** De no ser ésto el caso, existe la posibilidad que se aflojen estas tuercas liberando los muelles en su extremo superior, lo cual puede llevar a consecuencias desagradables. Ultimamente empleamos como seguro adicional, en vez de la tuerca hexagonal normal, una **tuerca autoretentora** (084 841 037).

Al hacer los trabajos de servicio al cliente hay que reponer las tuercas hexagonales por dichas tuercas autoretentoras en todos los vehículos desde No. 1 288 521 / 788 809 hasta el No. 1 297 000 / 796 790.

Para apretar firmemente y bloquear la tuerca inferior al apretar la contratuerca autoretentora, es recomendable usar una llave especial. Esta puede confectionarse en cada taller a partir de una llave anular duodecagonal usual del comercio, e/c 14, sin más, rebajando la altura de la llave a 4 mm y mecanizando según el caso dado el exterior de la parte anular para que la llave no sobrepase la tuerca apretada y no toque en el canto de la tuerca enrollada.



Porca autoretentora para mola dianteira com tensão inicial

Completando a circular de Serviço de clientela, série 29, Max No. 17, chamamos a atenção para o facto de que, ao montar a mola dianteira com tensão inicial é necessário bloquear convenientemente as duas porcas do tirante. A omissão desta precaução poderia levar as porcas a um desatarrachamento e libertar a extremidade superior das molas o que causaria embaraços sérios. Actualmente utilizamos como contra-porca, para a blocagem suplementar, em vez da porca normal hexagonal, uma porca autoretentora (084 841 037).

Em todos os veículos a partir do No. 1 288 521 / 788 809 até ao No. 1 297 000 / 796 790 devem-se trocar, durante os trabalhos do Serviço clientela, todas as porcas hexagonais por porcas autoretentoras.

Para o apêto e blocagem da primeira porca, quando do apêto da contra-porca autoretentora é recomendável fazer-se uso de uma chave especial. Ela pode ser confeccionada não importa em que oficina partindo de uma chave anular do comércio de 14, a 12 lados, a espessura dela será reduzida até 4 mm e a parte anular retocada de maneira que não ultrapasse a largura da primeira porca e assim não toque o bordo da porca de enrolamento.

Dado ad autobloccaggio per sospensione anteriore a molle precaricate

Facendo seguito alle Comunicazioni Serv. Ass. Clienti serie No. 29, Max No. 17, richiamiamo l'attenzione sul fatto che nel montaggio della sospensione a molle precaricate i due dadi sul tirante devono essere stretti e bloccati molto a fondo. Nel caso in cui ciò non venga effettuato, esiste la possibilità che questi dadi si allentino e che le molle divengano libere alla loro estremità superiore, il che può portare a conseguenze spiacevoli. Attualmente, come sicurezza supplementare contro tale allentamento, viene impiegato come contro dado, al posto di un normale dado esagonale, un dado ad autobloccaggio (084 841 037).

In occasione dell'esecuzione di lavori rientranti nella sfera dell'assistenza da prestare ai clienti, si dovrà sostituire su tutte le macchine da matr. 1 288 521 / 788 809 a matr. 1 297 000 / 796 790 i dadi esagonali con dadi ad autobloccaggio.

Per bloccare a fondo i dadi inferiori e per tenerli fermi durante il serraggio dei contro dadi ad autobloccaggio, è opportuno impiegare una chiave speciale. Tale chiave può essere fabbricata senza alcuna difficoltà in qualsiasi officina, partendo da una chiave poligonale ad anello a dodici incavi per dadi con apertura di chiave 14 mm, riducendo l'altezza della chiave stessa a 4 mm e, se è il caso, lavorando la parte esterna della zona anulare in modo tale che la chiave non superi l'altezza del dado bloccato e non risulti tale da potersi accoppiare allo spigolo del dado di autobloccaggio.

Contramoer voor voorgespannen voorveer

In aansluiting op onze Service-Mededelingen, Reeks 29, Max No. 17 maken wij erop attent, dat bij den inbouw van de voorgespannen voorveer de twee moeren op de trekstang zeer vast moeten worden aangesloten. Indien dit niet geschiedt, bestaat er kans, dat deze moeren losraken en de veren aan hun boven-eind vrij komen, welk feit onaangename gevolgen kan opleveren. In de laatste tijd monteerden wij als extra beveiliging inplaats van de normale zeskantmoer een contramoer (084 841 037).

Bij het doorvoeren van service beurten zijn op alle voertuigen van nummer 1 288 521 / 788 809 tot nummer 1 297 000 / 796 790 zeskantmoeren door contramoeren te vervangen.

Voor het vast aantrekken en het vasthouden van de ondere moer gedurende het vasttrekken van de contramoer ist het doelmatig, van een speciaal sleutel gebruik te maken. Een dergelijke moersleutel kan zonder veel moeite uit een gewone twaalfkantringsleutel met een spanwijdte van 14 mm in elke werkplaats vervaardigd worden, doordat men de sleutelhoogte op 4 mm reduceert en desnoods de buitenkant van het ringgedeelte dusdanig nawerkt, dat de sleutel niet boven de hoogte van de vastgetrokken moer uitsteekt en niet tegen den kant van de inrolmoer stuit.



Crankshaft

E

When carrying out work on an engine which involves fitting a replacement crankshaft, it should be noted that a variety of methods of lubricating the crankshaft and of venting the crankcase have been adopted.

The following versions have been employed: —

1. From vehicle No. 1234001/734001 to 1274973/775574 crankshaft 081 804 906 (Type I), which is vented through the left-hand crankshaft stub, controlled by means of a flat milled on the left-hand end of the shaft, and lubricated by means of two holes in the left-hand crankshaft stub, sealed with two sealing rings, and with one bronze bush in the left-hand crankcase section.

For this use the replacement crankshaft 081 804 904 (Type I) and a new bearing plate 081 801 564, which should be fitted in place of the existing bearing plate 081 801 509. Before fitting, remove the upper central stud in the left-hand crankcase section. The sealing ring 081 801 098 must be inserted in the bearing plate with the lips pointing outwards (i. e. away from the engine).

2. From vehicle No. 1274974/775575 to 1288857/788915 crankshaft 081 804 551 (Type II), vented through a hole in the intermediate gear (and hence no flat on the end of the left-hand crankshaft stub), and lubricated through a hole bored the full length of the left-hand crankshaft stub.

For this use the replacement crankshaft 081 804 905 (Type II) and a new bearing plate 081 801 404 (with bush, hexagon nut, lock washer, and sealing ring) which should be fitted in place of the existing bearing plate 081 801 536.

After fitting the replacement crankshaft (081 804 905), place the lock washer (B 16 DIN 137) with the hexagon nut (081 804 401) and the sealing ring (081 801 090) on the left-hand end of the crankshaft, and screw up tightly. Then place a dial gauge in contact with the collar on this nut, and rotate the crankshaft. The nut must not run more than 0.02 to 0.025 mm (0.0008 to 0.001 in) out of true. If the dial gauge pointer deflects to a greater extent than this, loosen the nut slightly, and hit it lightly with a hammer and a suitable punch. Take care to hit the nut, and not the crankshaft. Then tighten the nut up again and check once more with the dial gauge. Before fitting the bearing plate (081 801 404), grease the sealing ring (081 801 090), and turn it so that the joint can be observed through the slot in the bearing plate when the bush is inserted. Knock the bearing plate in carefully with a rubber hammer, and secure it.

Vilebrequin

F

Pour les réparations de moteurs nécessitant l'échange du vilebrequin, tenir compte des différents modes de graissage du vilebrequin et de ventilation du carter.

Les montages d'usine sont les suivants:

1. De la machine No. 1234001/734001 à la machine No. 1274973/775574 vilebrequin 081 804 906 (1er modèle) avec ventilation par l'arbre gauche, au travers d'un fraisage à son extrémité gauche, et graissage par 2 orifices dans l'arbre gauche, avec 2 bagues d'étanchéité d'arbre et une douille bronze dans le demicarter gauche.

A ce type correspond le vilebrequin échange standard 081 804 904 (1er modèle) et un nouveau flasque 081 801 564 à la place de l'ancien flasque 081 801 509. Avant le montage, enlever le goujon se trouvant en haut et dans l'axe du demi-carter. La bague d'étanchéité 081 801 098, doit être montée dans le flasque de façon que sa lèvre soit tournée vers l'extérieur (c'est-à-dire du côté opposé au moteur).

2. De la machine No. 1274974/775575 à la machine No. 1288857/788915 vilebrequin 081 804 551 (2ème modèle), avec ventilation par un orifice dans le pignon intermédiaire (donc pas de fraisage à l'extrémité de l'arbre gauche), et graissage par un orifice sur toute la longueur de l'arbre gauche.

A ce type correspond le vilebrequin échange standard 081 804 905 (2ème modèle), et un nouveau flasque 081 801 404 (avec douille, écrou 6 pans, rondelle Grower et bague d'étanchéité d'arbre), qui doit être monté à la place de l'ancien flasque 081 801 536.

Après le montage du vilebrequin échange standard (081 804 905), monter sur l'arbre gauche la rondelle Grower (B 16 DIN 137), la bague d'étanchéité d'arbre 081 801 090 et bloquer l'écrou 6 pans (081 804 401). Placer ensuite un appareil de mesure sur l'épaule de cet écrou et faire tourner le vilebrequin; l'écrou ne doit pas dévier de plus de 0,02—0,025 mm. Si la déviation est plus forte, dévisser quelque peu l'écrou et l'ajuster en le frappant à coups légers avec un marteau et une bouterolle. Attention! Ne frapper que sur l'écrou et pas sur l'arbre du vilebrequin. Rebloquer l'écrou et vérifier à nouveau à l'aide de l'appareil de mesure. Avant de monter le flasque (081 801 404), enduire de graisse et tourner la bague d'étanchéité d'arbre (081 801 090) de façon que sa jointure, au moment de l'introduction de la bague dans la douille, soit visible par la fente visière du flasque. Engager et mettre le flasque en place avec précaution à l'aide du marteau en caoutchouc.

Krukas

Bij motorreparaties, waarbij een krukasverwisseling betrokken is, moet gelet worden op de diverse krukasmeringen en verschillende carterontluchtingen.

Door de fabriek werden gemonteerd:

1. Van machine 1 234 001 / 734 001 tot 1 274 973 / 775 574 **krukas No. 081 804 906** (1e uitvoering) met **ontluchting door linker zijtap**, gecommandeerd door een infrasing aan linker tapeinde en **smering door 2 boringen** in linker tap met 2 stalen dichtringen afgedicht en een bronzen bus in linker carterheft.

Hiertoe behoort ruilkrukas 081 804 904 (1e uitvoering) en een nieuw lagerschild 081 801 564, dat in plaats van het oude lagerschild 081 801 509 moet worden gemonteerd. **Vóór de montage** moet de bovenste middelste schroef in linker carterheft worden verwijderd. De sammerring 081 801 098 moet zo in het lagerschild worden aangebracht, dat de lippen naar buiten (dus niet naar de motor!) wijzen.

2. Van machine 1 274 974 / 775 575 tot 1 288 857 / 788 915 **krukas No. 081 804 551** (2e uitvoering) met **ontluchting door een boring** in het tussentandwiel (daarom geen infrasing op linker tapeinde) en **smering door een boring** door de gehele linker zijtap.

Daar hoort bij ruilkrukas 081 804 905 (2e uitvoering) en een nieuw lagerschild 081 801 404 (met bus, moer, veerring en stalen dichtring), dat in plaats van het oude lagerschild 081 801 536 moet worden gemonteerd. **Na montage** van ruilkrukas (081 804 905) moet veerring (B 16 DIN 137) met moer (081 804 401) en stalen dichtring 081 801 090 op linker tap geschroefd en worden vastgedraaid. Dan wordt een meetklok op de borst van deze moer geplaatst en krukas doorgedraaid; de moer mag hoogstens 0,02-0,025 slingeren! Is de uitslag groter, dan moer iets lossen en met doorslag en hamer met een lichte tik richten. Voorzichtig! Alleen de moer richten, niet de zijtap van de krukas! Dan moer vasttrekken en weer met meetklok controleren. **Vóór montage** van lagerschild (081 801 404) de stalen dichtring (081 801 090) invetten en zo draaien, dat de stootrand van de ring bij inschuiven in de bus door het krijkgat van het lagerschild kan worden waargenomen. Lagerschild met rubber hamer voorzichtig aantikken en bevestigen.

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Albero motore

In occasione della riparazione di un motore, e più precisamente di una sostituzione dell'albero motore, bisogna osservare i vari sistemi di lubrificazione dell'albero motore e lo sfciato del motore.

Dalla fabbrica sono stati montati:

1. Da motore n. 734 001 fino a motore 775 574, **albero motore n. 081 804 906** (Il tipo) con **sfiato** attraverso l'albero sinistro, comandato da un'intagliatura alla sua estremità sinistra; lubrificazione attraverso 2 fori nell'albero sinistro con 2 anelli di tenuta in ghisa ed una boccia in bronzo nel carter sinistro.

Dei motori portano l'albero motore n. 081 804 904 (Il tipo) ed un nuovo supporto per il cuscinetto n. 081 801 564 da montare al posto del supporto per il cuscinetto n. 081 801 509. **Prima del montaggio** si deve allentare il bullone superiore del carter sinistro. Il premistoppa n. 081 801 098 deve essere montato nel supporto cuscinetto in modo che il labbro del premistoppa guardi verso l'esterno (non verso il motore!).

2. Da motore n. 775 575 fino a motore n. 788 915, **albero motore n. 081 804 551** (Il tipo) con **sfiato** attraverso un foro dell'ingranaggio cammes (nessuna intagliatura all'estremità sinistra dell'albero); **lubrificazione** tramite un foro attraverso l'intera lunghezza dell'albero sinistro.

Dei motori portano l'albero motore 081 804 905 (Il tipo) ed un nuovo supporto per il cuscinetto n. 081 801 404 (con boccia, dado, rondella e anello in ghisa) da montare al posto del supporto per il cuscinetto n. 081 801 536.

Dopo il montaggio dell'albero motore (081 804 905) si monta la rondella (B 16 DIN 137) il dado (081 804 401) e l'anello in ghisa 081 801 090 sull'albero sinistro fissandoli bene. Dopo di che si prende un micrometro e si misura il gioco del dado; il gioco deve essere al massimo da 0,02 - 0,025 mm! Se è superiore si allenta il dado e lo si aggiusta con una spina e martello. Attenzione! si aggiusta solo il dado e non l'albero. Si fissa nuovamente il dado e si misura con il micrometro. Prima di montare il supporto per il cuscinetto (081 801 404) si ingrassa l'anello in ghisa (081 801 090) e lo si gira in maniera di poter osservare attraverso il supporto l'introduzione nella boccia. Montare il supporto per il cuscinetto con un martello in gomma e fissarlo.

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Kurbeltrieb

Bei Motorinstandsetzungsarbeiten, die mit dem Einbau eines Austauschkurbeltriebes verbunden sind, ist die **verschiedenartige Kurbeltriebschmierung und Gehäuseentlüftung zu beachten**.

Von Haus aus wurden eingebaut:

1. Von Fahrzeug Nr. 1 234 001 / 734 001 bis 1 274 973 / 775 574 **Kurbeltrieb 081 804 906** (1. Ausführung) mit **Entlüftung durch die linke Achse**, gesteuert durch eine Einföhrung an deren linkem Ende und **Schmierung durch 2 Bohrungen** in der linken Achse mit 2 Wellendichtringen abgedichtet und einer Bronzebüchse in der linken Kurbelgehäusehälfte.

Dazu gehört der Austauschkurbeltrieb 081 804 904 (1. Ausf.) und ein neues Lagerschild 081 801 564, das anstelle des seitherigen Lagerschildes 081 801 509 einzubauen ist. **Vor Einbau** ist die obere mittlere Stiftschraube in der linken Kurbelgehäusehälfte zu entfernen. Der Abdichtring 081 801 098 muß im Lagerschild so eingesetzt werden, daß die Lippen nach außen (also nicht nach dem Motor!) zeigen.

2. Von Fahrzeug Nr. 1 274 974 / 775 575 bis 1 288 857 / 788 915 **Kurbeltrieb 081 804 551** (2. Ausf.) mit **Entlüftung durch eine Bohrung** im Zwischenrad (daher keine Einföhrung am Ende der linken Achse) und **Schmierung durch eine Bohrung** durch die gesamte Länge der linken Achse.

Dazu gehört der Austauschkurbeltrieb 081 804 905 (2. Ausf.) und ein neues Lagerschild 081 801 404 (mit Büchse, Sechskantmutter, Federscheibe und Wellendichtring), das anstelle des seitherigen Lagerschildes 081 801 536 einzubauen ist.

Nach Einbau des Austauschkurbeltriebes (081 804 905) ist die Federscheibe (B 16 DIN 137) mit Sechskantmutter (081 804 401) und Wellendichtring 081 801 090 auf die linke Achse aufzuschrauben und fest anzuziehen. Dann wird eine Meßuhr auf den Bund dieser Mutter aufgesetzt und der Kurbeltrieb durchgedreht; die Mutter darf höchstens 0,02-0,025 mm schwanken! Ist der Anschlag größer, so ist die Mutter etwas zu lösen und mit einem passenden Dorn und Hammer durch leichten Schlag zu richten. Vorsicht! Nur die Mutter - nicht etwa die Achse des Kurbeltriebes - richten! Dann Mutter wieder festziehen und nochmals mit Meßuhr prüfen. Vor Aufsetzen des Lagerschildes (081 801 404) den Wellendichtring (081 801 090) einfetten und so

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3. From vehicle No. 1288 858/788 916 to 1298 095/797 549, **crankshaft 081 804 569** (Type III) **vented** through a hole (6 mm = $\frac{1}{4}$ in dia.) in the **right-hand crankshaft stub** in front of the ball-bearing seating (total length of crankshaft stub 64 mm = $2\frac{1}{2}$ in), and **lubricated** through a hole bored the full length of the left-hand crankshaft stub. There are no plugs in the left-hand flywheel.

For this use the replacement crankshaft 081 804 907 (Type III) and a new bearing plate 081 801 404 (with bush, hexagon nut, lock washer, and sealing ring), which should be fitted in place of the existing bearing plate 081 801 536.

The fitting instructions are the same as for Type II above.

4. From vehicle No. 1298 096/797 550, **crankshaft 081 804 574** (Type IV), **vented** through a hole drilled in the left-hand flywheel and through the left-hand crankshaft stub (without a flat milled on the left-hand end), and **lubricated** through a hole bored in the left-hand crankshaft stub sealed by means of two sealing rings on the left-hand crankshaft stub and a brass bush in the left-hand crankshaft section.

For this use replacement crankshaft 081 804 908 together with the existing bearing plate 081 801 564.

If a bearing plate 081 801 509 (original type) is used in conjunction with a type IV crankshaft, it is essential that the hole behind the sealing ring be bored out to 16 mm (5/8 in) dia. to ensure that the crankcase is properly vented. To do this take out the sealing ring 081 801 098, and open up the hole situated behind it to 16 mm (5/8 in) dia. using a co-tribore or a twist drill with the point ground off. Take care not to damage the cover plate. Fit a new sealing ring 081 801 098 with the lips pointing outwards. An experienced skilled man is required to do this work properly.

Front springing

From vehicle No. 1823 382/3217 905, front shock absorbers holding a slightly larger quantity of oil, and therefore having a somewhat greater working range, have been fitted. When extended, this **shock absorber** is 11 mm (7/16 in) longer than the previous version, and it is designated **Part No. 084 841 518**.

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3. De la machine No. 1288 858/788 916 à la machine No. 1298 095/797 549 **vilebrequin 081 804 569** (3ème modèle), avec **ventilation** par un orifice (6 mm Ø) **dans l'arbre droite**, avant le siège du roulement à billes (longueur totale de l'arbre 64 mm), et **graissage** par un orifice sur toute la longueur de l'arbre gauche. Sans manchon de fermeture dans le volant gauche.

A ce type correspond le vilebrequin échange standard 081 804 907 (3ème modèle), et un nouveau flasque 081 801 404 (avec douille, écrou 6 pans, rondelle Grower et bague d'étanchéité d'arbre), qui doit être monté à la place de l'ancien flasque 081 801 536.

Pour le montage, se conformer aux prescriptions concernant le modèle II.

4. A partir de la machine No. 1298 096/797 550 **vilebrequin 081 804 574** (4ème modèle), avec ventilation par un orifice dans le volant gauche et dans l'arbre gauche (sans fraisage à l'extrémité de l'arbre gauche), et **graissage** par un orifice dans l'arbre gauche, avec 2 bagues d'étanchéité d'arbre sur l'arbre gauche, et une douille en bronze rouge dans le demi-carter gauche.

A ce type correspond le vilebrequin échange standard 081 804 908 et le flasque 081 801 564 déjà monté.

Si pour le modèle IV, on emploie un flasque 081 801 509 (modèle d'origine), il est indispensable auparavant, pour la ventilation, d'aléser à 16 mm Ø l'orifice se trouvant derrière la bague d'étanchéité. Pour cela, démonter la bague d'étanchéité 081 801 098 et aléser à 16 mm Ø l'orifice se trouvant derrière, en utilisant une fraise ou un foret hélicoïdal affûté à plat, en prenant soin de ne pas détériorer la bague de fermeture; monter une bague d'étanchéité 081 801 098, la lèvre tournée vers l'extérieur. Ce travail, pour être correctement exécuté, doit être par un spécialiste expérimenté.

Suspension AV

A partir de la machine No. 1823 382/3217 905 sont montés de nouveaux amortisseurs de roues AV, contenant une plus grande quantité d'huile, et ayant, par conséquent, une plus grande efficacité. Ce nouvel amortisseur est plus long de 11 mm et est référencé comme **pièce de rechange sous le No. 084 841 518**.

3. Van machine 1288 858/788 916 tot 1 298 095/797 549 **krukas No. 081 804 569** (3e uitvoering) met **ontluchting door een boring (6 mm. Ø) in de rechter zijtap** voor het kogellager (totale lengte van de as 64 mm.) en **smering door een boring door de totale lengte van linker zijtap**. Zonder drab-buisjes in linker krukaswang!

Daar hoort bij ruilkrukas 081 804 907 (3e uitvoering) en een nieuw lagerschild 081 801 404 (met bus, moer, veerring en stalen dichtring), dat in plaats van het oude lagerschild 081 801 536 moet worden gemonteerd. Voor montage gelden zelfde regels als voor uitvoering 2.

4. Vanaf machine 1 298 096/797 550 **krukas 081 804 574** (4e uitvoering) met ontluchting door een boring in linker krukaswang en door linker zijtap (zonder infrasing aan linker tapeinde) en **smering door een boring in linker zijtap, afgedicht door 2 stalen dichtringen op linker zijtap en een busje in linker carterhelft**.

Voor deze uitvoering dient ruilkrukas 081 804 908 waarbij lagerschild 081 801 564 gehandhaafd blijft.

Wordt voor uitvoering 4 een lagerschild 081 801 509 (1e uitvoering) gebruikt, dan moet voor de carterontluchting eerst de achter de simmering liggende boring op 16 mm. Ø worden opgeboord. Hiertoe eerst simmering 081 801 098 demonteren, de er achter liggende boring met frais of vlak geslepen spiraalboor — zonder beschadiging van sluitring — op 16 mm. Ø opboren, een nieuwe simmering 081 801 098 met lip naar buiten monteren. Alleen door een ervaren vakman uit te voeren!

Voorwielvering

Vanaf machine 1823 382/3 217 905 worden schokbrekers met groter olievolumen en daardoor grotere werking gemonteerd. Deze **schokbreker** is uitgetrokken 11 mm. langer en draagt **onderdeelnummer 084 841 518**.

3. Da motore 788 916 a motore 797 549. **Albero motore n. 081 804 569** (III tipo) con sfiato tramite un foro (6 mm. Ø) attraverso l'albero destro prima della sede del cuscinetto (lunghezza albero 64 mm.); **lubrificazione:** tramite un foro attraverso l'intera lunghezza dell'albero sinistro. Senza cartucce nel volano sinistro!

Dei motori portano: l'albero motore n. 081 804 907 (III tipo) e un nuovo supporto per il cuscinetto 081 801 404 (con boccola, dado, rondella, anello in ghisa) da montare al posto del supporto cuscinetto n. 081 801 536. Per il montaggio vedi punto 2.

4. Da motore 797 550, **albero motore 081 804 574** (IV tipo) con sfiato tramite un foro attraverso il volano sinistro e l'albero sinistro (senza intagliatura all'estremità sinistra dell'albero); **lubrificazione:** tramite un foro attraverso l'albero sinistro con due anelli in ghisa ed una boccola nel carter sinistro.

Dei motori portano: l'albero motore n. 081 804 908 con il supporto per il cuscinetto n. 081 801 564.

Usando per il IV tipo un supporto per il cuscinetto n. 081 801 509 (I tipo), è assolutamente necessario, per un buon funzionamento dello sfiato, allargare il foro dopo il premistoppa — a 16 mm. di Ø. Sismonta il premistoppa 081 801 098 e si allarga il foro con una fresa o una spirale — senza danneggiare la pastiglia del supporto — a 16 mm. di Ø e quindi si monta un nuovo premistoppa n. 081 801 098 con il labbro verso l'esterno.

Molleggio anteriore

Dal motociclo n. 1823 382/3 217 905, vengono montati degli ammortizzatori anteriori con una quantità d'olio superiore. **Questo ammortizzatore** è di 11 mm. più lungo e viene fornito con il numero di catalogo **084 841 518**.

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drehen, daß dessen Stoß bei Einführung in die Büchse durch den Sechsschlitz des Lagerschildes beobachtet werden kann. Lagerschild mit Gummihammer vorsichtig einschlagen und befestigen.

3. Von Fahrzeug Nr. 1 288 858/788 916 bis 1 298 095/797 549 **Kurbeltrieb 081 804 569** (3. Ausf.) mit **Entlüftung durch eine Bohrung (6 mm Ø) in der rechten Achse** vor dem Kugellagersitz (Gesamtlänge der Achse 64 mm) und **Schmierung durch eine Bohrung durch die gesamte Länge der linken Achse**. Ohne Verschlußhülsen in der linken Schwungscheibel

Dazu gehört der Austauschkurbeltrieb 081 804 907 (3. Ausf.) und ein neues Lagerschild 081 801 404 (mit Büchse, Sechskantmutter, Federscheibe und Wellendichtring), das anstelle des seitherigen Lagerschildes 081 801 536 einzubauen ist.

Für den Einbau gelten die gleichen Richtlinien wie für Ausführung 2.

4. Von Fahrzeug Nr. 1 298 096/797 550 **Kurbeltrieb 081 804 574** (4. Ausführung) mit **Entlüftung durch eine Bohrung in der linken Schwungscheibe** und durch die linke Achse (ohne Einfassung an deren linkem Ende) und **Schmierung durch eine Bohrung in der linken Achse, abgedichtet durch 2 Wellendichtringe auf der linken Achse und eine Rotgußbüchse in der linken Kurbelgehäusehälfte**.

Dazu gehört der Austauschkurbeltrieb 081 804 908 unter Weiterverwendung des eingebauten Lagerschildes 081 801 564.

Wird für Ausführung 4 ein Lagerschild 081 801 509 (ursprüngliche Ausführung) verwendet, so ist zur Gehäuseentlüftung vorher unbedingt die hinter dem Abdichting liegende Bohrung auf 16 mm Ø aufzubohren. Dazu ist der Abdichting 081 801 098 auszubauen, die dahinter liegende Bohrung mit Fräser oder flach geschliffenem Spiralbohrer — ohne Beschädigung der Verschlußscheibel — auf 16 mm Ø aufzubohren, ein neuer Abdichting 081 801 098 mit Lippe nach außen einzubauen. Gute Arbeitsausführung erfordert erfahrene Fachkraft!

Vorderradfederung

Ab Fahrzeug Nr. 1823 382/3 217 905 werden Vorderradstoßdämpfer mit etwas größerer Ölmenge und dadurch etwas größerem Arbeitsbereich eingebaut. Dieser **neue Stoßdämpfer** ist ausgezogen um 11 mm länger und wird unter der **Teilenummer 084 841 518** geführt.

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The **complete front springs** (084 841 908) fitted from vehicle No. 1288 521 / 788 809 can be replaced in pairs by the **new type** (084 841 911).

Since the bare springs (084 841 028) remain unchanged, it is also possible merely to replace the existing shock absorbers (084 841 514) by those of the new type (084 841 518), although as the length is different, **both** shock absorbers must be replaced. This is cheaper than replacing the complete front springs.

The following components will be required for this work: —

- | | |
|--|----------------------|
| 2 Telescopic shock absorbers | Part No. 084 841 518 |
| 2 Protective sleeves for shock absorbers | Part No. 084 841 041 |
| 4 Round-neck nuts | Part No. 084 841 040 |
| 4 Rubber rings for shock absorbers | Part No. 084 841 038 |
| 2 Spring mountings, upper | Part No. 084 841 039 |

First pull the protective sleeve, Part No. 084 841 041, over the shock absorber. Pull the piston rod out to its fullest extent, and on it place a round-neck nut, Part No. 084 841 040. Screw this down to the end of the threaded section. Place a rubber ring, Part No. 084 841 038 on the flange of the nut. A spring, Part No. 084 841 028, is then pushed over the shock absorber, and the upper spring mounting, Part No. 084 841 039 is then fitted. Now screw the second round-neck nut, Part No. 084 841 040, complete with rubber ring, Part No. 084 841 038, on to the shock-absorber piston rod. To tighten up it is advisable to grip the spring in a vice. Finally screw the lock nut, Part No. 084 841 037, on to the piston rod, and lock it against the round-neck nut, which should first have been screwed up tightly. To fit the complete spring unit, use socket spanner Part No. 078 791 901.

F

Les ressorts AV complets (084 841 908), montés à partir de la machine No. 1288 521 / 788 809 peuvent être échangés par paires contre le **nouveau modèle (084 841 911)**.

Le ressort nu (084 841 028), n'ayant pas été modifié, les anciens amortisseurs (084 841 514) ne peuvent être échangés contre le nouveau modèle (084 841 518) **que par paires**, à cause de la différence de longueur. Cet échange est moins onéreux que l'échange des ressorts AV complets. »

Pour cet échange, les pièces suivantes sont nécessaires:

- | | |
|--|--------------------------|
| 2 Amortisseurs télescopiques | No. de pièce 084 841 518 |
| 2 Manchons de protection en caoutchouc pour les amortisseurs | No. de pièce 084 841 041 |
| 4 Ecrous à gorge | No. de pièce 084 841 040 |
| 4 Bagues caoutchouc pour amortisseurs | No. de pièce 084 841 038 |
| 2 Appuis de ressort (supérieurs) | No. de pièce 084 841 039 |

Tout d'abord recouvrir l'amortisseur du manchon de protection en caoutchouc, pièce No. 084 841 041. Après avoir retiré complètement la tige de piston, visser sur celle-ci, un écrou à gorge pièce No. 084 841 040 jusqu'à la fin du filetage. La bague caoutchouc pièce No. 084 841 038 se place sur l'épaule de l'écrou à gorge. Passer le ressort pièce No. 084 841 028 sur l'amortisseur, puis mettre en place l'appui supérieur, pièce No. 084 841 039. Visser sur la tige de piston de l'amortisseur, le deuxième écrou à gorge, pièce No. 084 841 040, sur lequel on aura placé la bague de caoutchouc, No. de pièce 084 841 038. Pour bloquer, serrer le ressort dans un étau, et pour terminer visser l'écrou d'arrêt, pièce No. 084 841 037, sur la tige de piston et le bloquer contre l'écrou à gorge qui aura été lui-même bloqué avec soin auparavant. Pour le montage des ressorts complets utiliser a clé à douille No. 078 791 901.

H

Vanaf machine 1288 521/788 809 ingebouwde **complete voorveren** (084 841 908) kunnen paarsgewijze tegen de **nieuwe uitvoering** (084 841 911) worden verwisseld.

Omdat de kale veer (084 841 028) onveranderd gebleven is, kan de oude schokbreker wegens het lengteverschil **alleen maar paarsgewijze** worden verwisseld.

De volgende onderdelen zijn dan nodig:

2 schokbrekers	084 841 518
2 rubber slangen	084 841 041
4 halsmoeren	084 841 040
4 rubberringen schokbreker	084 841 038
2 veerlagers boven	084 841 039

Eerst rubber slang over schokbreker schuiven. Na uittrekken van zuigerstang halsmoer 084 841 040 tot draadeinde opschroeven. Op de rand van de halsmoer komt rubberring 084 841 038 te liggen. Over schokbreker wordt de veer 084 841 028 geschoven en dan bovenste veerlager 084 841 039 aangebracht. De tweede halsmoer 084 841 040 wordt met rubberring 084 841 038 op zuigerstang geschroefd. Men zet de veer in de bankschroef en monteert de stopmoer 084 841 037 op zuigerstangdraad en centert deze tegen de eerst vast aangetrokken halsmoer.

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Le molle anteriori complete (084 841 908) montate dal motociclo 1288 521/788 809 in poi, vengono cambiate in coppie con il **nuovo tipo** (084 841 911).

La molla nuda (081 841 028) è rimasta la stessa e quindi vengono cambiati solo gli ammortizzatori (084 841 514) con il nuovo tipo (084 841 518), solo in coppia. Questo è molto più economico che il cambio delle molle anteriori complete.

I pezzi occorrenti sono i seguenti:

2 ammortizzatori telescopici	n. 084 841 518
2 gomme protezione	n. 084 841 041
4 registri ammortizzatori	n. 084 841 040
4 anelli in gomma	n. 084 841 038
2 sedi molle superiori	n. 084 841 039

Per prima cosa l'ammortizzatore viene rivestito con la gomma protezione n. 084 841 041. Dopo avere tirato completamente l'ammortizzatore si monta un registro n. 084 841 040 che viene avvitato completamente, poi si monta l'anello in gomma n. 084 841 038, successivamente si monta la molla n. 084 841 028 e quindi la sede molla superiore n. 084 841 039. Il secondo dado registro n. 084 841 040 viene avvitato con l'anello in gomma n. 084 841 038 sulla bielletta dell'ammortizzatore. Per il fissaggio si monta la molla in una morsa, quindi si avvita il dado di fermo n. 084 841 037 sulla bielletta dell'ammortizzatore, fissandola per bene. Per il montaggio della molla completa, si usa la chiave a tubo n. 078 791 901.

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Die ab Fahrzeug Nr. 1288 521/788 809 eingebauten **kompletten Vorderfedern** (084 841 908) sind paarweise gegen die **neue Ausführung** (084 841 911) austauschbar.

Da die nackte Feder (084 841 028) unverändert geblieben ist, kann auch lediglich der seitherige Stoßdämpfer (084 841 514) gegen die neue Ausführung (084 841 518) — wegen des Längenunterschiedes allerdings **nur paarweise** — ausgewechselt werden. Dies ist preisgünstiger als die Auswechslung der kompletten Vorderfedern.

Dazu sind folgende Einzelteile erforderlich:

2 Teleskopstoßdämpfer	Teil-Nr. 084 841 518
2 Schutzschläuche für Stoßdämpfer	Teil-Nr. 084 841 041
4 Halsmuttern	Teil-Nr. 084 841 040
4 Gummiringe für Stoßdämpfer	Teil-Nr. 084 841 038
2 Federlager oben	Teil-Nr. 084 841 039

Zuerst wird über den Stoßdämpfer der Schutzschlauch, Teil-Nr. 084 841 041, gezogen. Nach vollständigem Ausziehen der Kolbenstange wird auf dieselbe eine Halsmutter, Teil-Nr. 084 841 040, aufgesetzt und bis zum Gewindeende eingeschraubt. Auf den Bund der Halsmutter kommt der Gummiring, Teil-Nr. 084 841 038, zu liegen. Über den Stoßdämpfer wird die Feder Teil-Nr. 084 841 028 gestülpt und dann das obere Federlager Teil-Nr. 084 841 039 aufgesetzt. Die zweite Halsmutter Teil-Nr. 084 841 040 wird mit dem aufgelegten Gummiring Teil-Nr. 084 841 038 auf die Kolbenstange des Stoßdämpfers aufgeschraubt. Zum Festziehen spannt man zweckmäßigerweise die Feder in den Schraubstock und bringt als Abschluß die Stopmutter Teil-Nr. 084 841 037, auf das Gewinde der Kolbenstange und kontert dieselbe gegen die zuvor fest angezogene Halsmutter. Zum Einbau der kompletten Feder verwendet man den Steckschlüssel Teil-Nr. 078 791 901.

→ ④

**SERVICE****SERVICE INFORMATION BULLETIN**

Nr. 4 (E.) V. 56

MAX

④

E

F

Fitting thicker front-brake back plates

With reference to our Service Circular No. 2x issued in November 1955 on the fitting of thicker front-brake back plates to Max-Special (and Super-Lux) machines, we would point out that, **when securing the anchorage link to the front forks, a suitable washer may have to be fitted between the link and the forks.** If this is not done, and the link is forced against the forks, there will be rapid wear of the bolt and the bushes.

Montage des disques renforcés de freins de roues AV

Nous reportant à notre "Circulaire du Service après-vente" No. 2 de Novembre 1955, concernant le montage de disques renforcés sur les freins de roues AV des Max-Spécial (et Super-Lux), nous attirons votre attention sur le fait que **en cas de besoin, il y a lieu d'intercaler une rondelle d'épaisseur à la fixation de la bride sur la fourche.** Si cette rondelle n'est pas intercalée et si la bride est montée directement contre la fourche, il se produira une usure prématurée des axes et des douilles.

H

Montage verzwaaarde voorwielankerplaat

Onder verwijzing naar servicebericht No. 2x van November 1955 over de montage van verzwaaarde ankerplaten bij Max (en Super-Lux) attenderen wij, dat bij de bevestiging van de lever aan de vork zo nodig een onderlegting moet worden aangebracht. Gebeurt dit niet en wordt de lever tegen de vork gedrukt, dan veroorzaakt dit voortijdige slijtage van bout en bussen.

I

Montaggio del disco del freno rinforzato per mozzi centrali

Facciamo riferimento al ns. servizio informazioni n. 2x del novembre 1955 per il montaggio del disco del freno rinforzato per mozzi centrali per MAX-SPEZIAL e (Super-Lux), e facciamo presente che per il fissaggio della piastrina (085 851 529) alla forcella è necessario montare una rondella di rasamento, in caso contrario la piastrina viene tirata verso la forcella e porta a una prematura usura del bullone e della boccola.

Nr. 4 (E1) V. 56

MAX ④

Einbau verstärkter Vorderradbremsscheiben

Unter Hinweis auf unsere Kundendienstmitteilung Nr. 2x vom November 1955 über den Einbau verstärkter Vorderradbremsscheiben bei Max-Spezial (und Super-Lux), machen wir darauf aufmerksam, daß bei der Befestigung der Lasche an der Gabel nötigenfalls eine Unterlagscheibe angebracht werden muß. Geschieht dies nicht und wird die Lasche gegen die Gabel gezogen, so führt dies zu frühzeitigem Verschleiß der Bolzen und Büchsen.



Important informations excerpted from "Service Circulars" previously issued

a) Check of Oil Level

To check the correct oil level, allow the engine to run in neutral until the oil accumulated in the crankcase has been returned to the tank.

b) Lubricating Oil

Use of graphite additives in the lubricating oil should be avoided, since under unfavourable conditions the deposits may settle and block the oil passages.

c) Engine output and dual seat

If the saddle is replaced by a dual seat, care must be taken to ensure that the opening at the top of the frame is not completely closed. If necessary a number of holes should be drilled in the base of the dual seat in order to permit sufficient air to flow to the carburetter, otherwise the restriction in the air supply will lead to a reduction in engine output and an increase in fuel consumption.

d) Ignition Timing

Ignition timing should be set to 7.6 mm (= 36° crank angle) before TDC with the centrifugal mechanism fully extended. Make sure that there is no stop to limit the movement of the flyweight.

e) Valve Clearance

Adjustment of valves should be made at regular intervals, so as to prevent the exhaust valve from seizing up or burning out. Correct clearances are:

- 0.05 mm (0.002") in the case of the inlet valve,
- 0.10 mm (0.004") in the case of the exhaust valve.

Adjustment should be made with both valves closed and the piston at TDC.

f) Lower Frame Covering

Whenever a vehicle not yet provided with the lower frame cover plate 083 831 018 is brought to your workshop, make sure of subsequent attachment of this part.

g) Front Engine Supporting Plate

Reinforced supporting plate (083 831 002) should be installed for engine front suspension in all vehicles produced prior to the introduction of frame No. 1 249 120, whenever repair work has to be carried out.

h) Ventilation of Battery Container

When servicing batteries, always make certain — especially during warm seasons — that adequate ventilation of the battery container is ensured. Ventilation louvres must not be stopped up by cleaning rags or other articles.

i) Foot Rests

As has frequently been observed that some workshops will fix the foot-rests the wrong way. Remember,

- the foot-rest with a short arm should be fitted on the left-hand side;
- the foot-rest with the longer arm belongs to the right.

j) Installation of Bowden Cable for Exhaust Valve Lifter

From vehicle No. 1 288 078/788 554 a more suitable installation of the Bowden cable for the exhaust valve lifter was introduced by the provision of a modified cylinder head cover (081 802 520). The new cover is provided with a threaded socket for the Bowden cable adjusting screw. Subsequent installation in vehicles of earlier production is practicable if the new Bowden cable (084 844 506) for valve lifters and the nipples 084 844 022 are used in connection with it.

k) Installation of the Speedometer Flexible Shaft

From vehicle No. 1 289 974/789 525 the speedometer flexible shaft of 1000 mm length was replaced by one 800 mm long only which is fitted along the right-hand side of the fork.

The shortened shaft can also be used for vehicles of previous production. For this purpose the upper cable clip is turned approximately by 90°. The shaft is fitted along the right-hand fork, and, to facilitate connection, the speedometer drive casing is moved accordingly. The lower cable clip can be dispensed with.

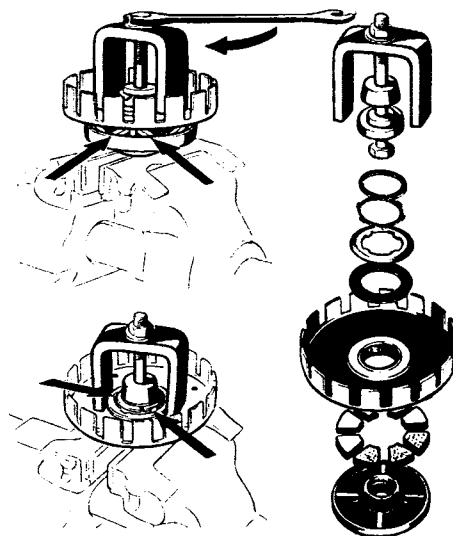
l)

Mounting of Reinforced Rubber Shock Absorbers in Clutch

Vehicles from No. 1269 623/770 249 are fitted with reinforced rubber shock absorbers 082 813 041 instead of the 8 shock absorbers 082 813 014 previously used.

A special tool 088 891 919 has been developed by means of which the assembly of the shock absorbing member can easily be effected.

1. Clamp hexagon head bolt of the tool tightly into vice. Slide cup for rubber shock absorbers over the bolt.
2. Insert the 8 thinly oil-coated and talc powdered rubber shock absorbers into the cup, so that in each partition two rubbers will form a sort of roof. The dished housing is placed on top with ridges fitting into the gaps of the turned-up rubbers; if necessary use a small screwdriver.
3. Having plastic drive plate (smooth side up), thrust disc, and locking plate assembled, install cone of the device, locking ring (use fresh one each time), bracket, and nut. Then tighten.
4. The locking ring is now pushed into place over the cone by means of two screwdrivers. Before securing the locking ring, make sure it is completely within the annular groove with the abutting ends located on one of the bridges of the boss of the cup, and not on one of the four longitudinal grooves.



m)

Pre-loaded Front and Rear Springing

As an improving feature vehicles from No. 1288 521/788 809 are equipped with a **pre-loaded front and rear springing with reinforced shock absorbers.**

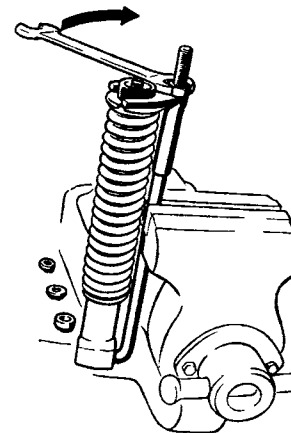
Subsequent installation in vehicles of earlier production of the front springing is practicable when replaced as a whole. The new rear springing can be incorporated only in conjunction with a new frame rear section (083 831 518). For details on component part alterations, please refer to attached supplementary list to Spare Parts List MAX, December 1954 edition.

Three special tools have been developed by us which will be found very suitable for removal and mounting of pre-loaded springs. (Incidentally, this feature was also introduced in Super-Lux).

Disassembly and assembly of pre-loaded front springing and shock absorber unit:

Removal: Remove spring and shock absorber (use box spanner 078 791 901). Fit unit into **tensioning device (088 891 922)** and tighten nut mildly. Support tie rod with screwdriver and remove both nuts. Slacken nut of tensioning device. Remove spring retainer, cover plate, spacer bush, two rubber cushions, and spring.

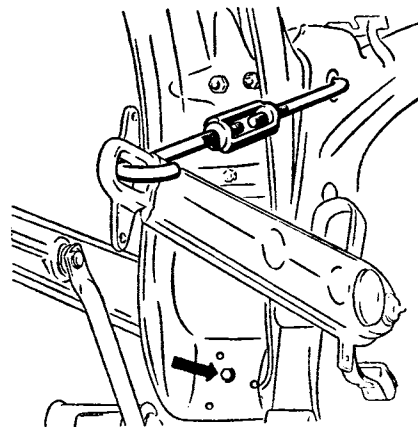
Assembly: Place shock absorber with spring in tensioning device. Draw tie rod fully out. Slide spacer bush and one rubber cushion with spring retainer over rod and tighten tensioning device until spacer bush projects through spring retainer. Mount rubber cushion with cover plates and tighten both nuts. Loosen tensioning device and install spring and shock absorber unit.



Removal and installation of pre-loaded rear springing and shock absorber unit:

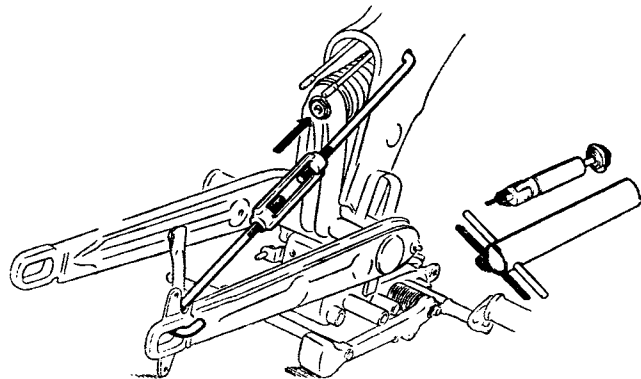
Removal: Place **tensioning device (088 891 923)** into position on frame and tighten nut lightly. Remove three bolts and support holding exhaust pipe. Remove flat head bolt now visible. Unscrew two lock nuts from rear frame. Remove frame rear section and cover plate. Remove collar nut and spring washer (support tie rod with screwdriver). Loosen tensioning nut and remove device. Remove locking ring. Push out the shaft by means of a drift (take care of stop collar). Remove fork together with spring and washer. Screw out shock absorber by means of **special spanner (088 891 920)**.

Assembly: Fasten shock absorber by means of special spanner. Pull tension rod fully out. Insert spring and washer. Place rear fork and stop collars into position. Drive shaft in and secure (use oil).



Tension rear fork by means of tensioning device until collar nut with spring washer can be tightened. **Make sure the slot of the tension rod is horizontal!** Place cover plate on frame rear section with narrow side pointing in direction of motion. Install frame rear section and turn lock nuts a few threads. Align holes of front and rear frame by tensioning the nut of tensioning device. Install centre bolt (flat head bolt) and spring washers and tighten. Remove device. Tighten lock nuts and make certain the cover plate is properly positioned. Install brackets for exhaust pipe. **Details regarding above mentioned special tools will be found in chapter "Special Tools" No. 9 of this "Service Circular".**

We strongly recommend to have this leaf filed in "Max Repair Manuals" under section "Frame", or a pertinent reference made, **after your personnel have been thoroughly schooled.**



n) Self-locking nut for pre-stressed front springs

We should like to draw your attention to the fact that **when assembling the pre-stressed front springs, the two nuts on the tie rod must be very firmly tightened up.** If this is not done, it is possible for the nuts to become loose, and for the upper ends of the springs to be freed, which can have very unpleasant results. We have recently introduced a **self-locking nut (084 841 037)** in place of the normal hexagonal lock nut as an additional safety measure.

The original hexagonal nuts should be replaced by self-locking nuts on all machines from No. 1 288 521/788 809 to No. 1 297 000/796 790 when carrying out normal servicing.

To tighten up the lower nut and to hold it while the lock nut is being tightened up it is advisable to use a special spanner. This can be made up without difficulty in any workshop by modifying a normal twelve-sided ring spanner with a width across the flats of 14 mm (0.55"). The thickness of the spanner should be reduced to 4 mm (0.16"), and the outside of the ring reduced as necessary to ensure that the spanner does not project above the lower nut when it is tightened up, and does not foul the self-locking nut.

o) Rear Fork Springing

The groove distance of spring retainer (073 732 057) was changed from 55 mm to 48 mm. The special box spanner 088 891 913 cannot be employed for the new spring retainer type. On the other hand the **special box spanner 078 791 985 may be adapted to suit the purpose by turning it out to 45.2 + 0.1 mm in diameter and 12 mm in depth.** This spanner is available now.

p) Rear Fork Telescopic Shock Absorber

The telescopic shock absorber is now fitted with lock washer 8 DIN 6799 (circlip was used up to now). Bear in mind that a **washer 083 832 037 should be fitted in addition to it.**



q)

Front springing

From vehicle No. 1 823 382/3 217 905, front shock absorbers holding a slightly larger quantity of oil, and therefore having a somewhat greater working range, have been fitted. When extended, this **shock absorber** is 11 mm (7/16") longer than the previous version, and it is designated **Part No. 084 841 518**.

The **complete front springs** (084 841 903) fitted from vehicle No. 1 288 521/788 809 can be replaced in pairs by the **new type** (084 841 911).

Since the bare springs (084 841 028) remain unchanged, it is also possible merely to replace the existing shock absorbers (084 841 514) by those of the new type (084 841 518), although as the length is different, **both** shock absorbers must be replaced. This is cheaper than replacing the complete front springs.

The following components will be required for this work: —

2 Telescopic shock absorbers	Part No. 084 841 518
2 Protective sleeves for shock absorbers	Part No. 084 841 041
4 Round-neck nuts	Part No. 084 841 040
4 Rubber rings for shock absorbers	Part No. 084 841 038
2 Spring mountings, upper	Part No. 084 841 039

First pull the protective sleeve, Part No. 084 841 041, over the shock absorber. Pull the piston rod out to its fullest extent, and on it place a round-neck nut, Part No. 084 841 040. Screw this down to the end of the threaded section. Place a rubber ring, Part No. 084 841 038 on the flange of the nut. A spring, Part No. 084 841 028, is then pushed over the shock absorber, and the upper spring mounting, Part No. 084 841 039 is then fitted. Now screw the second round-neck nut, Part No. 084 841 040, complete with rubber ring, Part No. 084 841 038, on to the shock-absorber piston rod. To tighten up it is advisable to grip the spring in a vice. Finally screw the lock nut, Part No. 084 841 037, on to the piston rod, and lock it against the round-neck nut, which should first have been screwed up tightly. To fit the complete spring unit, use socket spanner Part No. 078 791 901.

r)

Strengthened brake back plates

Strengthened brake back plates are being fitted from vehicle No. 1 295 095/794 910 (at front 085 851 535, at rear: 085 852 541). If it is desired to fit these to older vehicles, the following parts will be required when carrying out the modification:

Front brake:	1 Strengthened brake back plate	085 851 535
	1 Strap, complete	085 851 529
	1 Cap for hub tube	085 851 052
	1 Rubber ring	085 851 048
	1 Fitted bolt, front	085 851 030
	1 Fitted bolt, rear	085 851 049
	4 Caps	085 851 017
	4 Spring washers	A 7 DIN 137
	1 Bush, front, 12-mm	085 851 044
	1 Bush, rear, 14 mm	085 851 043
	2 Self-locking nuts	084 841 020
	1 Radial seal	085 851 038
	1 Rubber cap	085 851 046
Rear brake:	1 Brake back plate	085 852 541
	1 Seal	035 851 038

When fitting the strengthened front brake back plate, note the following points:

The brake shoes should be removed from the old back plate and fitted to the new back plate. If a 127-mm (5") bearing tube (085 852 045) is fitted, 4 mm (0.16") should be cut off to reduce its length to 123 mm (4.84"). Then press the bearing tube into the bearing bush (19 51 00 013) so that this overhangs it by 4 mm and so that the collar on the new cap (085 851 052) is a good fit in the bearing bush.

The seal (085 852 060) previously fitted in the hub is to be replaced by the new seal (085 851 038). The latter should be fitted with the lip pointing outwards and with the metal holder level with the body of the hub (use a tubular or brass punch). When fitting the bearing tube into the brake back plate place the new rubber ring (085 851 048) under the collar on the bearing bush.

Before fitting the wheel file down the lug (usually) found on the left-hand swinging link until it is level with the eye on the swinging link. Before the new strap (085 851 529) is fitted to the brake back plate, the new rubber cap (085 851 046) should be drawn over the end that is attached to the forks (thicker boss) using a few drops of oil to ease it. Then fit the longer bush (085 851 043) and the two caps (085 851 017).

When the strap is attached to the forks, a thin spacer can be used if necessary.

(Sketch see next page)

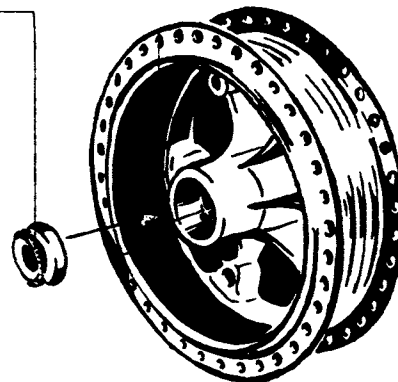
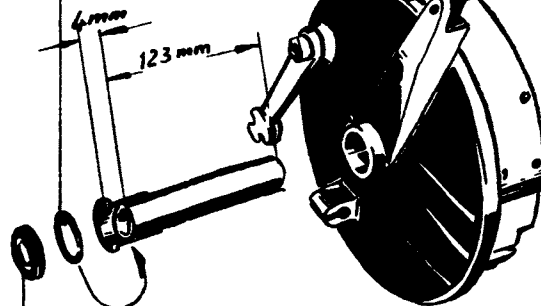


085 851 048

085 851 038

Lip outwards

085 851 535



085 851 052

085 861 046

085 851 043
(14 mm)

085 851 017

085 851 529

084 841 020

Lock washer

A7 DIN 137

085 851 049

085 851 044
(12 mm)

085 851 030

s)

Repair Manual

It is the object of this book to assist NSU workshop personnel in servicing our customers' vehicles.

In compiling these repair manuals full use was made of the experience hitherto gained in our workshops. The book is available to NSU dealers at a reduced price.

The main operations and working procedures, illustrated by a number of pictures and diagrams, are treated in a manner any expert will have no difficulty to understand. If no particular reference has been made any data given applies to both "Standard" and "Special" type. Standard job times as contained in this book have been determined on the strength of extensive practical tests and represent average times for estimates, working time control, etc. They are valid on the condition that special tools designed by us are available in every efficient NSU workshop for expert and time saving performance of repair work. It is understood that genuine spare and replacement parts should be employed exclusively, so as to ensure expert repairing at reasonable cost.

t)

Mud Boxes in Crank Case

Sludge deposits are subject to operating conditions. It is advisable to perform a **cleaning after a mileage of 4...6000 km**, in order to prevent heavy sludge deposits to interfere with the lubrication. For removal of box the **special screwdriver 088 891 918 or 088 891 926** should be used.

u)

Crankshaft

When carrying out work on an engine which involves fitting a replacement crankshaft, it should be noted that a **variety of methods of lubricating the crankshaft and of venting the crankcase** have been adopted.

The following versions have been employed: —

- From vehicle No. 1234 001/734 001 to 1274 973/775 574 **crankshaft 081 804 906** (Type I), which is **vented through the left-hand crankshaft stub**, controlled by means of a flat milled on the left-hand end of the shaft, and **lubricated** by means of two holes in the left-hand crankshaft stub, sealed with two sealing rings, and with one bronze bush in the left-hand crankcase section.

For this use the replacement crankshaft 081 804 904 (Type I) and a new bearing plate 081 801 564, which should be fitted in place of the existing bearing plate 081 801 509. **Before fitting**, remove the upper central stud in the left-hand crankcase section. The sealing ring 081 801 098 must be inserted in the bearing plate with the lips pointing inwards (i. e. to the engine).

- From vehicle No. 1274 974/775 575 to 1288 857/788 915 **crankshaft 081 804 551** (Type II), **vented** through a hole in the intermediate gear (and hence no flat on the end of the left-hand crankshaft stub), and **lubricated** through a hole bored the full length of the left-hand crankshaft stub.

For this use the replacement crankshaft 081 804 905 (Type II) and a new bearing plate 081 801 404 (with bush, hexagon nut, lock washer, and

sealing ring) which should be fitted in place of the existing bearing plate 081 801 536.

After fitting the replacement crankshaft (081 804 905), place the lock washer (B 16 DIN 137) with the hexagon nut (081 804 401) and the sealing ring (081 801 090) on the left-hand end of the crankshaft, and screw up tightly. Then place a dial gauge in contact with the collar on this nut, and rotate the crankshaft. The nut must not run more than 0.02 to 0.025 mm (0.0008 to 0.001 in) out of true. If the dial gauge pointer deflects to a greater extent than this, loosen the nut slightly, and hit it lightly with a hammer and a suitable punch. Take care to hit the nut, and not the crankshaft. Then tighten the nut up again and check once more with the dial gauge. **Before fitting the bearing plate** (081 801 404), grease the sealing ring (081 801 090), and turn it so that the joint can be observed through the slot in the bearing plate when the bush is inserted. Knock the bearing plate in carefully with a rubber hammer, and secure it.

- From vehicle No. 1288 858/788 916 to 1298 095/797 549, **crankshaft 081 804 569** (Type III) **vented** through a hole (6 mm = 1/4" dia.) in the **right-hand crankshaft stub** in front of the ball-bearing seating (total length of crankshaft stub 64 mm = 2 1/2"), and **lubricated** through a hole bored the full length of the left-hand crankshaft stub. There are no plugs in the left-hand flywheel.

For this use the replacement crankshaft 081 804 907 (Type III) and a new bearing plate 081 801 404 (with bush, hexagon nut, lock washer, and sealing ring), which should be fitted in place of the existing bearing plate 081 801 536.

The fitting instructions are the same as for Type II above.

- From vehicle No. 1298 096/797 550, **crankshaft 081 804 574** (Type IV), **vented** through a hole drilled in the left-hand flywheel and through the left-hand crankshaft stub (without a flat milled on the left-hand end), and **lubricated** through a hole bored in the left-hand crankshaft stub sealed by means of two sealing rings on the left-hand crankshaft stub and a brass bush in the left-hand crankshaft section.

For this use replacement crankshaft 081 804 908 together with the existing bearing plate 081 801 564.

If a bearing plate 081 801 509 (original type) is used in conjunction with a type IV crankshaft, it is essential that the hole behind the sealing ring be bored out to 16 mm (5/8") dia. to ensure that the crankcase is properly vented. To do this take out the sealing ring 081 801 098, and open up the hole situated behind it to 16 mm (5/8") dia. using a counterbore or a twist drill with the point ground off. Take care not to damage the cover plate. Fit a new sealing ring 081 801 098 with the lips pointing outwards. An experienced man is required to do this work properly.

v)

Pressing the driving sprocket onto the crankshaft

It is advisable to use a sleeve for pressing the driving sprocket onto the crankshaft. The dimensions of this sleeve are: internal diameter 18 mm (0.71"), external diameter 24 mm (0.95"), and length 15 mm (0.59"). (Part No. 088 891 921.)



w)

Eccentric shaft and intermediate gear

Please note that as a temporary measure an eccentric shaft, part No. 081 805 904, and an intermediate gear, part No. 031 835 195, were fitted to vehicles No. 1 274 974/775 575 to No. 1 296 287/796 008. The eccentric shaft, part No. 081 805 902 and intermediate gear, part No. 081 805 079 are now again being fitted.

x)

Engine Lubrication

Engine lubrication with "Max-Special" (from vehicles No. 1 274 974/775 575) was modified as compared to the previous standard type. Valve stem guides are completely sealed by rubber sleeves. Adequate lubrication of the cylinder bore is ensured by the provision of specially ground pistons. Engines thus equipped are marked by **"O" on the cylinder foot**. Replacement cylinders provided with a piston of this type are equally marked, and can be obtained under Component No. 081 802 906.

When repairing engines provided with valve stem guides sealed by rubber sleeves, be sure to install pistons with the new **grind surface** only. Employment of pistons of different grind surface may lead to seizing up of the piston.

The new type cylinder and piston, however, **must not be installed in engines of previous design**. Such procedure would probably give rise to increased oil consumption. Our replacement procedure is provided with either type of cylinder.

If it is desired to equip an old type engine with above innovation the following parts will be required:

1 Replacement cylinder	
with specially ground piston	Part No. 081 802 906
A set of replacement parts consisting of	
1 Inlet valve stem guide	Part No. 081 802 057
1 Rubber sleeve for above	Part No. 081 805 152
1 Exhaust valve stem guide	Part No. 081 802 056
1 Rubber sleeve for above	Part No. 081 805 197
2 Bottom spring support	Part No. 081 805 153
2 Key ring plates	Part No. 081 805 070

Top spring supports 081 805 069 can be used again.

In case the workshop is not in a position to replace such valve stem guides in an expert manner,

- 1 replacement cylinder head, equivalent to new, fitted with new type valve stem guides and with valves installed Part No. 081 802 905

can be obtained at a special price on return of a reconditionable cylinder head of former design.

Delivery of the new or replacement parts is liable to full payment, since there is no reason from a technical point of view for general reconstruction of earlier engines.

Strengthened brake back plates

Further to Item 8 of our Service Circular No. 2 issued in November 1955, we would point out that the strengthened brake back plate (085 851 535) is now being supplied with a **built-in vulkallon** bush (085 851 055), the internal diameter of which is slightly less than that of the brass bush (085 851 045) formerly fitted. As a result when a strengthened back plate is fitted it will now be necessary to replace the bearing bush (19 51 00 013) on the bearing tube by one having a diameter which is 2/10 mm less; these smaller diameter bearing bushes are supplied under the part number 19 51 01 013.

Subsequent fitting of rear spring units

To enable you to comply with the wishes of the occasional customer who requires rear spring units to be fitted to a Max which has already been in service for some time, we can supply through the Spare Parts organisation:

2 Spring units (Part No. 083 832 527) (2 off)

1 set of mounting components (Part No. 083 832 901).

Instructions for Fitting (available in German only).

These units can be fitted to any machine, and also to the Lux from machine No. 1 744 171 / 990 070.

Crankshaft bearing plate

With reference to the information in Service Circular No. 4 issued in May, 1956 regarding the various types of crankshaft that are available, please note that when fitting a **new crankshaft (081 804 551)** or a **replacement crankshaft (081 804 905)** of Type II, or a **new crankshaft (081 804 569)** or a **replacement crankshaft (081 804 907)** of Type III it is **absolutely essential** that a **bearing plate (081 801 404)** be fitted. The bearing plate to be used with new or replacement crankshafts of Types I and IV is Part No. 081 801 564. For this bearing plate the **normal instructions are reversed**, and the lip on the sealing ring **should point inwards** (i.e. toward the engine).

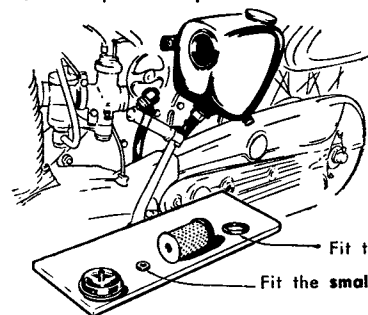
It is very important that this instruction should be complied with, since otherwise the engine lubrication cannot be fully effective.

Oil changes

With those machines which are fitted with Micronic-filters (paper filters) (fitted as standard from machine No. 1830 801 / 3 224 062) special attention must be paid to the following points when changing the oil:

1. At the oil change which takes place every 2000 km (1300 miles) the **antechamber in the oil tank must be carefully cleaned** after taking out the Micronic-filter. The filter element itself must not be washed out in petrol or a similar liquid, since this would cause the filter paper to dissolve.
2. **At every third oil change** (i.e. every 6000 km or 3900 miles) a **new filter element (19 74 00 508)** must be fitted.

Please bring this information to the notice not only of your works staff, but also of your customers, since if the micronic-filter is kept in use for too long a period it will become blocked by the dirt that is deposited. As a result the pressure relief valve will open, and the oil is returned to the engine without passing through the filter. This can cause damage to the engine which could have been avoided, and may lead to expensive repairs.



Although an explanatory leaflet is inserted in the Instruction Books supplied with the machines, we would ask you to draw the owners' attention to this point when they take delivery of their machines, and to **make a note on the Service Card** that the filter element should be changed after covering 6000 km (3900 miles). We shall be making the necessary additions to the Service Cards when they are next reprinted. **When fitting a new filter element (19 74 00 508)** note that the rubber rings (19 74 00 008 and 19 74 00 009) should be inserted as shown in the adjoining sketch.

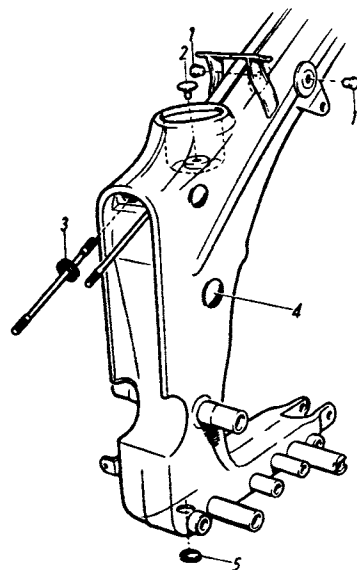
Further technical developments

1. **Inlet air silencer.** The air which the engine requires for combustion is drawn into the interior of the central pressed-steel frame from underneath the knee grips. There it deposits the larger impurities and it is silenced, and then the air passes through the air filter to the carburetter. The correct carburetter settings are:
Bing carburetter 2/26/55. Part No. 081 816 515

Main jet	100
Needle jet	2.66
Needle position	2
Pilot jet	50
Mixing chamber insert	5
Pilot air screw	1 turn open
Float	47 b (11 grams)

On the conclusion of the running-in period, the pilot air screw (031 109 329) is opened about an additional 1/2 turn.

2. **Throttle twistgrip.** In place of the twistgrip previously employed, a type known as a "rotary" grip is now being fitted, in which the grip has to be turned only a small distance to alter the throttle from the "fully-open" to the "idling" positions. Provided a new throttle cable is fitted, and certain minor alterations are made to the handlebars, this new type of twistgrip can be fitted in place of the type previously employed.
3. **Rear spring units.** The spring units which are now being fitted to production machines in place of the previous central spring on the telescopic shock absorbers require no maintenance. Similar spring units can be supplied for subsequent fitting or for modifying older types of machine (see Item above).



Engine performance / Fuel consumption

Unlike the "Standard-Max" and "Max-Spezial" models, which obtain the fresh air required for carburation through a number of openings in the frame, "Supermax" models (from frame No. 1 830 801/3 224 062 onwards) are equipped with a completely sealed frame (083 831 902), which draws in the air through two intakes in its side (underneath the fuel tank). Any additional air entering the frame will inevitably give rise to rough running and poor engine performance. It is therefore most important to check at once whether all the rubber sleeves, plugs and caps listed below and shown on the diagram are correctly in position when investigating the causes of faulty engine performance.

1. When replacing a standard saddle by a dualseat, always seal both saddle bearing bushes with rubber plugs (1) (Part No. 085 851 012, supplied free of charge with dualseats obtained from NSU). Rubber plug (2) (Part No. 083 831 110) should be removed so that the dualseat can be screwed on (M 10 thread).
2. When assembling a frame rear part to the machine, the two necked-down bolts in the frame front part should be sealed with two rubber grommets (3) (Part No. 083 831 066).
3. The machining hole on the right-hand side of the frame front part should be sealed by means of a sealing cap (4) (Part No. 073 731 055).
4. The outlet hole in the bottom of the frame front part should be sealed by means of a rubber cap (5) (Part No. 083 831 104).

Fitting a Sidecar

Set the suspension unit to "W", load the sidecar and insert the sidecar connecting member into the frame. If necessary, file one of the flats down on the front mounting screw and insert the latter from the left; the rear mounting screw should be inserted from the right. Proceed normally to remove and refit the chaincase.